METHOD AND SYSTEM FOR FLEXIBLE CHANNEL ASSOCIATION

ABSTRACT OF THE DISCLOSURE

A supervisory communications device, such as a headend device within a cable communications network, monitors and controls communications with a plurality of remote communications devices, such as cable modems, throughout a widely distributed network. The supervisory device allocates bandwidth on the upstream channels by sending MAP messages over its downstream channel. A master-slave interface permits a second supervisory device to be connected to increase the number of available upstream channels. When one device operates as the slave device to the other, the slave device is programmable to select MAP messages from either of the master device or the slave device. A primary filter and a slave filter are provided to specify which downstream channel(s) has the authority to issue MAP messages for each available upstream channel. The filters utilizes registers to authenticate the source of the MAP messages. If properly authenticated, the MAP messages are forwarded to a parse processor to format the MAP messages, and send the MAP messages to a MAP FIFO to associate the upstream channel(s) with the appropriate source downstream channel.